DOCUMENT RESUME

ED 147 678 CG 011 997

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TITLE The Effects of Learned Helplessness on Alcohol Consumption.
PUB DATE Apr 77
NOTE 8p.; Paper presented at the Annual Meeting of the Eastern Psychological Association (April 13-16, 1977, Boston, Massachusetts)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Affective Behavior; Alcoholic Beverages; Anxiety; College Students; *Drinking; *Females; *Hostility; Personality Studies; *Problem Solving; Research Projects; *Stress Variables
IDENTIFIERS *Learned Helplessness

ABSTRACT

Widely held cultural beliefs assert that alcohol can offer both an ameliorative and preventive solution to the problem of depression. This study attempted to assess the effects of learned helplessness--a possible laboratory analog to reactive depression--on alcohol consumption. Thirty-eight female undergraduates were randomly assigned (within drinking category blocks) to one of two conditions. Half were given unsolvable problems (learned helplessness condition) and half were given solvable problems (control). Relative to controls, subjects in the learned helplessness group reported increased depression and hostility. In addition, they drank more beer in a taste-rating task. Finally, although the manipulation was one previously reported in the literature, expected anagram solution deficits were not exhibited by the learned helplessness subjects. This failure, coupled with the findings of increased hostility and depression in the helplessness group, may suggest that a frustration/stress reaction rather than a state of helplessness characterized the subjects. (Author)

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The Effects of Learned Helplessness on Alcohol Consumption

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Presented at Eastern Psychological Association Meetings

Boston, April, 1977

Female undergraduates were given unsolvable problems in a learned helplessness paradigm. Relative to controls they (a) reported increased depressive and hostile affect; (b) drank more beer in a taste-rating task. Implications for the relationships among stress, depression and alcohol consumption are discussed.

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Problem

To date, behavioral scientists have found the relationship between alcohol and depression to be rather elusive. This statement often strikes the average person as peculiar, since "drowning your sorrows" (in alcohol) is a common catchphrase and, in trying to prepare for anticipated stress and/or sorrow, many individuals "fortify" themselves by imbibing freely. These latter two common observations highlight widely held beliefs in our culture that alcohol may offer both an ameliorative and a preventative solution to the problem of depression.

To bring the examination of depression into the laboratory, many investigators have been adapting the paradigm of learned helplessness as described by Seligman and his coworkers.[1&2] Such a strategy would be quite compatible with the viewpoints of Marlatt[3] and McClelland[4] who assert that alcohol consumption is often perceived by the drinker as re-establishing a sense of control or power over the feelings of helplessness. Indeed, Bibring[5] has cogently theorized that helplessness, not just introjected hostility, comprises a crucial antecedent and concomitant of depression. The study described below is an attempt to assess the effects of learned helplessness--a possible laboratory analogue of reactive depression--on alcohol consumption.

Subjects

Thirty-eight female undergraduate volunteers were blocked on their scores obtained on the Cahalan Drinking Habits Questionnaire.[6]

Procedures

Subjects were first randomly assigned, within blocks, to one of two conditions. Through the manipulation of feedback in an hypothesis testing task similar to Levine's[7] half the subjects were given unsolvable problems (learned helplessness group) and half were given solvable problems (control group).

Following this task, ten subjects from each group were given a variation of the alcohol taste task employed by Marlatt, Demming and Reid.[8] That is, the subjects were led to believe that they were rating four beverages on taste qualities, while the dependent measure of interest was the amount they consumed. In the present study, subjects were allowed access to (asked to rate) both alcoholic beers and non-alcoholic ginger ales.

The remaining 18 subjects (nine from each condition) were given solvable anagrams instead of the taste task immediately following the hypothesis testing problems. The procedures in these two groups were employed as a check to determine if the manipulation produced a "helplessness" effect comparable to that found by Hiroto and Seligman[9] (i.e., a deficit in subsequent task performance).

Also, affect was assessed immediately before and after the problem solving manipulations, and again after the ensuing taste task or anagrams (depending upon condition), through the use of the Multiple Affect Adjective Checklist (MAACL)[10] which yields scores for depression, hostility and anxiety.

Results

(A) Beverage Consumption. As seen in Figure 1, the learned helplessness group consumed a mean of 5.7 oz. of beer and 3.4 oz. of ginger ale. In contrast, the control group drank a mean of 3.6 oz. of beer and 3.6 oz. of ginger ale. A 2 x 2 Anova revealed a significant interaction of beverage by condition ($F = 4.96$; $df = 1,18$: p .05). Also, the amount of beer drunk in the control group was equal to the amount of ginger ale drunk in both groups.

Insert Figure 1 here

(B) MAACL. As Figure 2 shows there were no significant differences between

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Insert Figure 2 here

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groups at the initial administration of the MAACL on any of the affect categories (depression, hostility or anxiety). After exposure to problem solving, we found that the helpless groups obtained higher scores on the depression and hostility scales than did the control group (Depression $F = 5.41$; $df = 1.34$; $p < .05$) (Hostility $F = 14.2$, $df = 2.34$; $p < .025$), but no differences were found with the anxiety measure. The final administration of the MAACL, after alcohol or anagrams, showed no differences between groups.

(C) Anagrams. No differences were found between groups on latency to solve anagrams or on the total number solved.

Implications and Conclusions

Subjects exposed to the unsolvable problems drank more alcohol than did controls. That this did not merely reflect an increase in overall consumption level is suggested by the finding that ginger ale consumption was equal across groups. The increases in the depression and hostility scales among subjects exposed to unsolvable problems gives further evidence consistent with the idea that such a task is experienced as stressful. As we noted above, increased hostility has often been linked to depression by many psychodynamic theorists. The finding of no differences on the third MAACL may indicate dissipation of the effect of the manipulation either as a result of time or successful solution of even some of the anagrams.

Finally, although our manipulation was a replication of one previously reported,[9] we failed to observe similar deficits on anagram solution. While admittedly speculative, perhaps this measure is not very sensitive or may be subject to procedural variations.

In any event, our data underline the importance of bringing the alcohol-depression relationship into the laboratory even at an analogue level, in order to more closely examine a problem of major significance.

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FIGURE ONE

Consumption Rates.

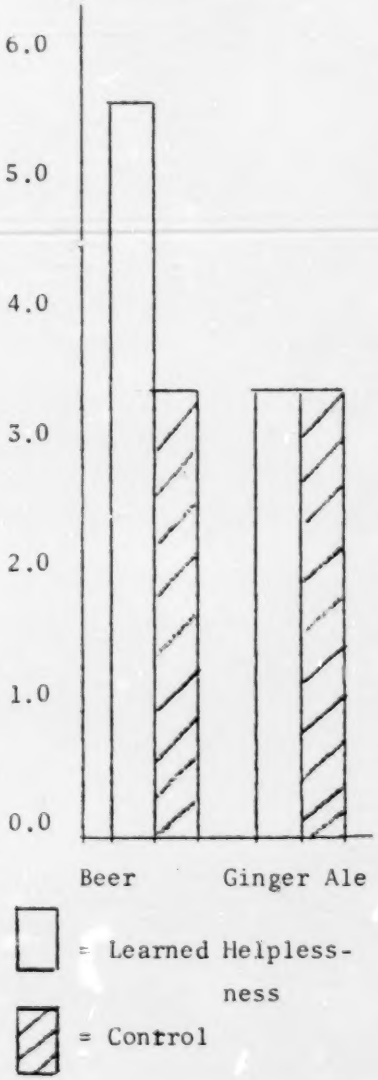

FIGURE TWO Depression and Hostility Scores on the MAACL.